

## Medical Science

### To Cite:

Alkhrisi A, Alanazi K, Alzahrani A, Almutairi R, Alahmari M, Alkanhal A. Quality management among healthcare professionals in Saudi Arabia: Systematic review. *Medical Science* 2024; 28: e87ms3373  
doi: <https://doi.org/10.54905/diss.v28i149.e87ms3373>

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### Peer-Review History

Received: 12 April 2024

Reviewed & Revised: 16/April/2024 to 20/July/2024

Accepted: 25 July 2024

Published: 30 July 2024

### Peer-review Method

External peer-review was done through double-blind method.

Medical Science

pISSN 2321-7359; eISSN 2321-7367



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# Quality management among healthcare professionals in Saudi Arabia: Systematic review

**Abdulaziz Alkhrisi, Khalid Alanazi, Abdulelah Alzahrani, Rayan Almutairi, Muath Alahmari, Ahmad Alkanhal**

## ABSTRACT

**Background:** Quality Management has become one of the most studied factors in the last decade, including in the healthcare sector. The aim of this study is to assess the awareness of quality management among healthcare professionals in KSA in the period 2014 to 2024. **Method:** We conducted this systematic review in accordance with PRISMA guidelines, searching (MEDLINE, EBSCO, Science Direct, Google Scholar, PubMed, and CINAHL) for studies about quality management awareness among Saudi Arabian healthcare professionals published between 2014 and 2024. **Results:** The majority of the healthcare professionals in the country have a high perceived level of awareness about Quality management and its application in the sector. However, few studies showed that there is a considerable low level of awareness among some of the professionals. In regarding the factors affecting quality awareness, the main factors identified include training, top Management support, continuous improvement, employee involvement and teamwork. **Conclusion:** the vast majority of the healthcare workers in Saudi Arabia are seen to be highly knowledgeable of quality management and how it is used in the industry. However, a small number of research revealed that certain professionals have a noticeably low degree of knowledge.

**Keywords:** Awareness, quality management, healthcare professionals

## 1. INTRODUCTION

### Background

Over the last decade, healthcare organizations around the world have been facing a lot of challenges that are mainly concerned with the efficiency, effectiveness, and quality of the services they provide. There has been a pressing need for firms to embrace or adopt new approaches to managing the quality of services to enhance patient satisfaction (Mosadeghrad, 2014). Quality management plays a crucial role in determining healthcare outcomes and patients satisfaction in hospitals (Mohamed et al., 2021). Researchers agree that in the present world, the

popular saying is that 'customer is king' and this also applies to the healthcare sector (Abdallah et al., 2018). The users of the healthcare services are also regarded as customers (Shrivastava et al., 2022). Professionals are always needed to be well-equipped with skills and knowledge through good training. After acquiring the necessary competency in quality management, they will be in a better position to carry out their services as required and meet the quality management goals of continuous improvement in the capacity of the firm to offer high-quality services to patients (McCalman et al., 2018).

Therefore, healthcare employees, including doctors and nurses, are the crucial people who need to be aware and adhere to these quality management systems. Therefore, research shows that many organizations employ quality awareness programs to prepare their workers to become more effective in continuous improvement (Shrivastava et al., 2022). When healthcare workers ignore or misunderstand the expectations of the patients and fail to be aware of the patients' expectations, the overall quality of care will be negatively affected (Abdallah et al., 2018). This study will therefore seek to conduct a systematic review of the awareness of quality management among healthcare professionals in KSA in the period 2012-2024. We will review the existing studies on awareness of quality management among healthcare professionals around the world and in Saudi Arabia and then review the studies that have been conducted in Saudi Arabia between 2012 and 2021.

### Problem statement

The healthcare sector in Saudi Arabia has entered a period of rapid development as the country races toward the vision 2030. A number of studies have been conducted to determine the impact of quality management on the sector as well as the level of adoption of the quality management systems (Abdallah et al., 2018). Majority of the existing systematic reviews have focused on the overall quality of care management and not on level of awareness Aljuaid et al., (2016), Almutairi and Moussa, (2014), while no recent studies have examined the level of awareness of quality management among healthcare professionals in KSA.

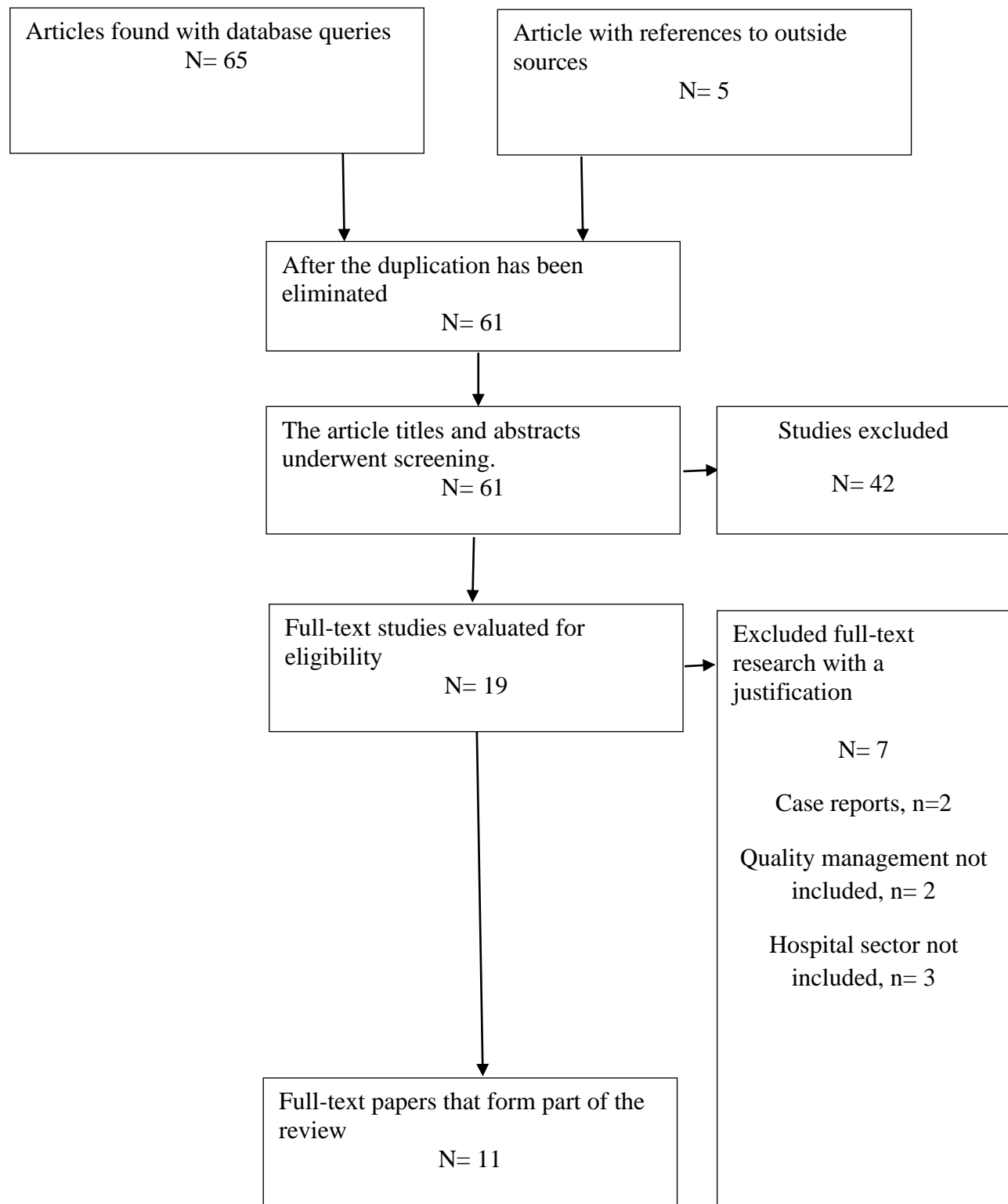
### Objectives

The aim of this study is to assess the awareness of quality management among healthcare professionals in KSA in the period 2014-2024 and to explore the factors affecting quality awareness in the healthcare sector.

## 2. METHOD

According to PRISMA guidelines we conducted this systematic review, we searched (MEDLINE, EBSCO, Science Direct, Google Scholar, PubMed and CINAHL) for studies about awareness of quality management among healthcare professionals in Saudi Arabia and factors affecting quality awareness in the healthcare sector. Only studies published in English language and published in the period from 2014 to 2024 were included. The following search terms were used; awareness, quality management, healthcare professionals, healthcare workers, healthcare providers, Saudi Arabia, quality management. We looked through abstracts and titles to find papers that met the inclusion requirements.

If the references were considered relevant, two authors separately evaluated the entire texts of the articles to determine which research met the inclusion requirements. We did not accept duplicate submissions, reviews, case studies, comments, or letters to the editor. After duplication removal and exclusion of full texts not relevant to our inclusion criteria we included 11 articles in our systematic review (Figure 1). Data from the studies were retrieved independently by the reviewers. The research goal, design, and primary findings were gathered from the investigations. When a consensus could not be achieved, a third reviewer was consulted in order to resolve conflicts.



**Figure 1** PRISMA consort chart of selection process

### 3. RESULTS

#### Study characteristics

In this study, many articles gathered information on quality management practices in Saudi Arabia; however, there were limited studies focusing on healthcare staff awareness of quality management in the sector. Out of the 11 journal articles that were included in the research study for analysis, 10 articles used cross-sectional research design, 1 article used Sequential explanatory mixed methods design. The most common means of collecting the data from the healthcare workforce was questionnaires, although many authors acknowledge that many healthcare workers find qualitative comments to be more relevant and informative.

#### The level of awareness of quality management among healthcare professionals in Saudi Arabia

Of the 11 articles that were included in the research study, 5 articles reported that there were low levels of awareness about quality management in KSA, 6 articles showed considerably higher levels of awareness and one article found mixed results. The study by Abdelaliam and Alsenany, (2022), Al-Ghamdi et al., (2016), Alam and Alabdulaali, (2016) showed that the healthcare workers in KSA had good knowledge of TQM in the sector and this had enhanced their awareness about quality management and applied it in their daily operations. The study by Alam and Alabdulaali, (2016) indicated that the level of awareness among nurses on quality was acceptable, although compliance in select hospitals was lower. These findings are also supported by Abdelaliam and Alsenany, (2022) findings which showed that majority of the nurses in the study had a higher perception of patient safety and quality culture (88.36%), which contributed to higher quality awareness levels.

The research by Sial et al., (2021) showed that the majority of the respondents had a great understanding of quality management applications (Table 1). However, a number of studies showed that there were low levels of awareness among healthcare workers, Alomari et al., (2015) reported that only 39% of the respondents in the study had undergone training on healthcare quality and the median percentage of knowledge regarding quality was 48%. This indicated a low level of awareness. This is also supported by the research by Alrashed, (2022), which showed that nurses and physicians have the lowest scores in how they perceive TQM compared to other employees. It concluded that Quality management was still immature and hence low levels of awareness. Also, the study by Alatawi et al., (2022) and Alsughayir, (2014) noted that staff lack appropriate dare for decision-making in quality management and lack of understanding which indicates low awareness levels. This was also supported by.

#### Factors affecting quality awareness in the healthcare sector

The main factor affecting provider awareness of quality management was training, as identified by (Alam and Alabdulaali, 2016; Abdelaliam and Alsenany, 2022). The study by Alam and Alabdulaali, (2016) noted that the awareness levels of the nurses were good and this could be linked to increased training. The awareness level of the nurses on quality, patient safety and general safety was found to be good, but the compliance level was lower than knowledge levels. In the study by Abdelaliam and Alsenany, (2022) the results showed that training and education opportunities scored highest in many of the hospitals, with 87% reporting that their hospitals had a strong focus on training and education, which enhances awareness.

These findings are also supported by Abbas, (2019) who noted that the quality of training positively reflected the awareness and quality of medical services that are offered in Wadi Addawasir. Enabling environment was identified as an important factor in determining the awareness of quality management among healthcare workers. The study by Alomari et al., (2015) revealed that poor hospital support was among the factors that were attributed to relatively low knowledge and perception of quality management standards as the results showed a medium percentage of attitude towards hospital support was 54%. Also, the respondents in the study by Abbas, (2019) noted that even if they were well aware of quality management, lack of follow-up and support from higher authorities negatively affected its implementation.

The findings suggested that even with quality training, a lack of an enabling environment and activation by the top management will affect quality management, therefore the concept of leadership and management are crucial for TQM awareness, as noted by Al-Omari et al., (2015), they enhance awareness by supporting a quality management culture through budgeting, measurement and task definition. Another important factor that influences awareness levels, is continuous improvement according to (Sial et al., 2021; Abdelaliam and Alsenany, 2022). Therefore, the efforts that are involved in continuous process improvement by the healthcare workers

can find an incremental improvement over time which enhances their awareness. Another factor that was found to be important in employee awareness of quality management was employee involvement, according to (Sial et al., 2021).

**Table 1** Summary of included

N	Citation	Study design	Aim	Finding
1	Alomari et al., 2015	Descriptive cross-sectional	To evaluate the knowledge and attitudes of staff members in small-sized hospitals in order to create a plan to address the current state of affairs and remove obstacles to high-quality medical practice.	Regarding the application of quality management standards and hospital support, the survey found that knowledge and perception scores were comparatively low (around 50%).
2.	Alam and Alabdulaali, 2016	Cross-sectional design	To find out how knowledgeable the nursing staff is about the regulations and procedures pertaining to general safety, patient safety, and quality of care	Although the nurses' awareness of general safety, patient safety, and quality was found to be high, their compliance level lagged below their knowledge levels.
3	Al-Ghamdi et al., 2016	Cross-sectional design	To look at the connection between total quality management (TQM) and staff commitment in Saudi Arabia's public healthcare system.	Workers are informed about TQM and have attested to the fact that their dedication to enhancing TQM has a notable and immediate impact.
4	Alrashed, 2022	Cross-sectional design	To conduct a quantitative analysis of patient complaints that indicated a quality management (QM) problem.	The results showed that QM was immature and that applying quality concepts was hampered by ignorance.
5	Alaraki, 2014	Cross-sectional design	To investigate how the Saudi Ministry of Health hospitals' performance is affected by the use of TQM practices.	According to the survey, there is a lack of understanding in Saudi hospitals as they struggle to involve clinical personnel in their quality effort.
6	Abbas, 2019	Cross-sectional design	To assess how the hospital administration changed its operations to implement TQM and how TQM principles were applied	The results demonstrated that staff members believe the health sector is putting quality management systems into place, but higher authorities are not following up, which has a detrimental impact on awareness.
7	Alatawi et al., 2022	Cross-sectional design	To investigate the elements that affect the Kingdom of Saudi Arabia's public hospitals' ability to provide health services efficiently	The results demonstrated that the lack of a suitable health informatics system leaves the staff without the necessary data to make decisions in quality management.
8	Sial et al., 2021	Cross-sectional design	To evaluate the state of application and degree of knowledge of (TQM) in medical libraries	The majority of those surveyed said they were well-versed in TQM applications for medical libraries.
9	Alsughayir, 2014	Cross-sectional design	To look into the obstacles Saudi Arabian service organisations have faced when implementing TQM	The study discovered that another significant element influencing TQM implementation is a lack of knowledge about the concept.
10	Abdelaliem and Alsenany, 2022	Descriptive cross-sectional study	To determine how nurses view factors that affect patient safety culture in order to advance long-term nursing practice	The results showed that nursing staff members had high levels of awareness and a positive impression of the patient safety culture.
11	Alzahrani, 2015	Sequential explanatory	To investigate the views of medical professionals and nurses about patient	The results demonstrate that opinions towards patient safety and quality vary

		mixed methods design	safety and quality control	between doctors and nurses.
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4. DISCUSSION

The aim of any healthcare organization is to provide high-quality and holistic care services to the patients addressing their individual healthcare needs. Quality management is an important change in healthcare organizations that leads to organization transformation, which concerns all the staff in the firm, and their behavior. The current study sought to determine the awareness level of quality management among healthcare professionals in KSA. The majority of existing studies in the country have shown that healthcare professionals in the have a high perceived level of awareness about Quality management and its application in the sector. KSA vision 2030 has accelerated the implementation of quality management systems in the KSA health-sector and management have been challenged to make sure that all staff is aware of the systems. Being ranked 26th among 190 global healthcare systems shows that KSA has been able to implement and establish quality management systems and practices that are improving the quality outcomes in the nation (Alomari et al., 2015).

However, some of the studies showed that there is also a considerably low level of awareness among some professionals. This supports the suggestions by Opoku, (2012) who noted that many organizations were not using or applying quality management practices appropriately and this could be due to the increasing demands in the fast-changing environment of the delivery of services. This type of mixed findings have also been reported in countries such as Lithuanian healthcare organizations where research such as Mosadeghrad, (2013) study showed that quality management systems were effectively being applied in about 39% of the nursing and treatment hospitals while it was under implementation in half of the surveyed healthcare organizations. The findings of the study highlighted some of the main factors affecting the awareness, including; training Abdelaliem and Alsenany, (2022), Alam and Alabdulaali, (2016), top Management support Abdelaliem and Alsenany, (2022), and continuous improvement (Sial et al., 2021).

These findings agree with the description given by Weckenmann et al., (2015) who noted that quality management involves a group of techniques, practices and principles that include teamwork, continuous improvement and customer focus. The findings are also in line with the idea presented by Øvretveit, (2000), who notes that quality management focuses on the idea of continuous improvement of healthcare services quality, process management, commitment from management and organizational culture. In the research by Al-Shdaifat, (2015), it was recommended that training is an important factor in quality management awareness and that organizations need to invest more in resources to train health workers. In regards to employee involvement, Roland, (2019) stated that to ensure that there is great awareness among the employees, different professionals are well presented in the committee, which supports the findings in the current study on the need for employee involvement as a factor in

Managerial contribution

The effect of the current study is essential for the KSA healthcare sector, which is seeking to enhance its quality of services as emphasized in vision 2030. Therefore, the findings present a unique original contribution to the KSA sector by offering valuable evidence regarding the awareness of quality management among healthcare professionals in the country, which can be used as a foundation to develop strategies for future quality development in the sector. Furthermore, the study also contributes to the KSA MoH policymakers' knowledge and healthcare organizations planning. By use of the findings of this study, the healthcare organizations which report low levels of awareness can use the findings to benchmark against the advanced quality certified firms within the KSA context. Also, the study findings suggest the need for the organizations in KSA to increase the awareness of healthcare professionals about quality management by conducting regular training programs, involving them in decision making and enhancing managerial support, which will enhance the application of the TQM as learned in training.

In overall, to ensure that all hospitals staff are complaint and aware with quality management, there is a need for regular assessment of the status of the MoH hospitals and their capability to create and establish their own quality management policies that comply with the MoH policies. The findings of the current study show that, even with the effort of the government to enhance quality, quality of the healthcare providers' awareness is crucial and hence, hospitals should take it upon themselves to make sure that the government policies are well implemented and understood. The findings have shown that training is one of the key factors that enhance and determines awareness of quality management. Therefore, the MoH, which is the main training provider for hospitals,



needs to assess the need for training in regard to requirements for the implementation of quality management systems before designing the different training programs. In addition, the MoH should create policies that guide the hospitals on how to best identify training needs and training providers to address all training requirements and approaches to enhance awareness.

### Scientific contribution

The current study is a unique study that has evaluated major research studies that have been conducted from 2014-2024 on quality management awareness among healthcare professionals in KSA. As aforementioned, there have been limited studies on quality awareness and hence this study will contribute to filling the knowledge gap. The study suggests that managers' healthcare workers all have different perceptions regarding quality management and by use of a systematic review approach, the research has revealed the complexity of the challenges among different stakeholders and factors that affect awareness. Also, this study provides a valuable contribution to this field in different aspects.

First, it provides important country-specific research for scholars interested in understanding the link between quality management factors and awareness of quality management, as well as patient satisfaction and service quality. In addition, this could be of interest to the public health researchers in KSA and policymakers of other nations in the region that are undergoing similar reform stages as they have similar healthcare systems. Therefore, overall, this research has made important contributions to the enrichment of relevant literature and provides methodological and theoretical contributions. It provides an important foundation under which research on quality management can be based on a view review of work conducted between 2014-2024. It has contributed by assessing the state of evidence regarding quality management, indicating the existence of inadequacies in the literature, and pointing to the need for more studies.

## 5. CONCLUSION

The study concludes that healthcare professionals in Saudi Arabia have considerably higher awareness levels of quality management and its application. Management support, training, and opportunities for continuous development, employee involvement and teamwork were identified among factors that affect awareness levels. Professional's awareness level regarding quality management has a significant impact on enhancing the quality of services which enhances patient satisfaction.

### Funding

This study has not received any external funding.

### Conflict of interest

The authors declare that there is no conflict of interests.

### Data and materials availability

All data sets collected during this study are available upon reasonable request from the corresponding author.

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